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Solera® Universal Hardware Manual Awning to Solera 18V Power Awning (For Aftermarket Applications)

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Solera® Universal Hardware
Manual Awning to
Solera 18V Power Awning
(For Aftermarket Applications)

Introduction

System Information

The Solera® 18V Power Awning features a unique, rechargeable battery that fits right inside the awning arm and comes with everything you need to connect to the awning motor wire.

NOTE: The LCI Solera® Universal Hardware kit for a manual to power conversion will **ONLY** fit Dometic and Carefree awnings.

Additional Information Sources

Additional information about this product can be obtained from www.lci1.com/support or by using the myLCI app. Replacement components can be ordered from <https://store.lci1.com/> or by using the myLCI app. The myLCI app is available for free on iTunes® for iPhone® and iPad® and also on Google Play™ for Android™ users.

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Safety Information

Warning, Caution and Danger symbols indicate that an installation procedure has a safety risk involved and may cause death, serious injury or property damage if not performed safely and within the parameters set forth in this manual.

⚠ CAUTION

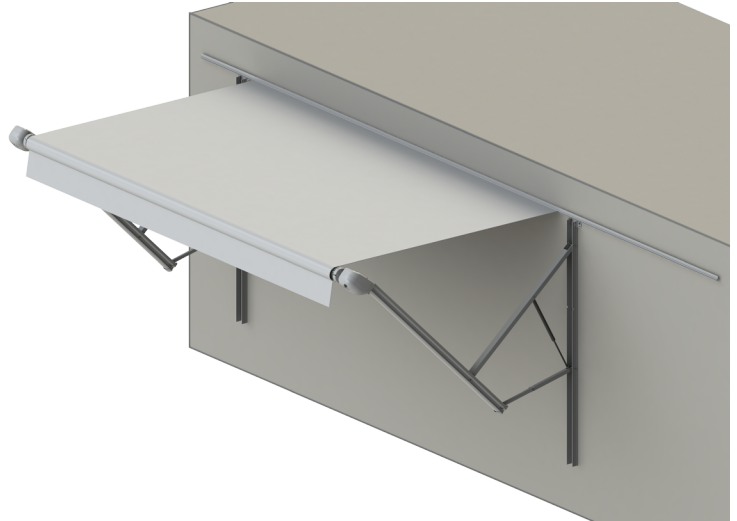
MOVING PARTS CAN PINCH, CRUSH OR CUT. KEEP CLEAR AND USE CAUTION.

Manual awnings that contain springs use tension for ease of operation and can be harmful to the end user should the stored tension come unbound. Cotter pins, travel locks and cam locks are installed and **MUST** be used to contain the tension when the system is being serviced.

⚠ WARNING

FAILURE TO USE THE INSTALLED SAFETY FEATURES MAY RESULT IN DEATH, SERIOUS INJURY, DAMAGE TO THE UNIT AND/OR VOIDING A WARRANTY.

Parts List



Universal Kit No.	Description
434729	Solera® Power 18V 69" Kit, Black
434730	Solera® Power 18V 69" Kit, White

Tall Arm (69")

Solera® 18V Tall Arm (69") Flat Adjustable Pitch Arms require:

- 69" of unobstructed area from the awning rail straight down.
- Minimum clearance of 2 1/2" between the awning rail and the top of the entry door.



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Preparation

Resources Required

- Additional Qualified Assistants
- Cordless or Electric Drill or Screw Gun
- Appropriate Drive and Drill Bits
- Socket Wrench
- 3/8" Socket
- Rivet Gun
- Locking Pliers
- Ladder
- Silicone Sealant
- Non-permanent Method of Marking

NOTE: It is the customer's responsibility to fill in/seal any and all holes left on the unit after installation.

Conversion

Dometic Manual Awning to Solera® 18V Power Pack Awning

NOTE: All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

NOTE: This manual will refer to the "drive side" and "idler side" throughout for various instructions. The "drive side" is the right hand side of the awning when facing the awning from the exterior of the unit. The "idler side" is the left hand side of the awning when facing the awning from the exterior of the unit.

NOTE: When converting a Dometic Manual Awning to a Solera® 18V Power Awning, the converted awning will be approximately 2" wider than the initial awning. Be sure there are no obstructions that may interfere with the installation of the support arm assemblies **PRIOR** to beginning the conversion process.

1. Unlock the travel locks, move the cam lock to the roll out position and extend the awning approximately 12".
2. Insert a cotter pin (**Fig.1C**) into the end cap (**Fig.1A**) at each end of the awning.
3. On the drive side of the awning, and with an assistant holding the roll tube, use a 7/16" socket to remove the bolt securing the drive head (**Fig.1B**) to the support arm (**Fig.1D**).

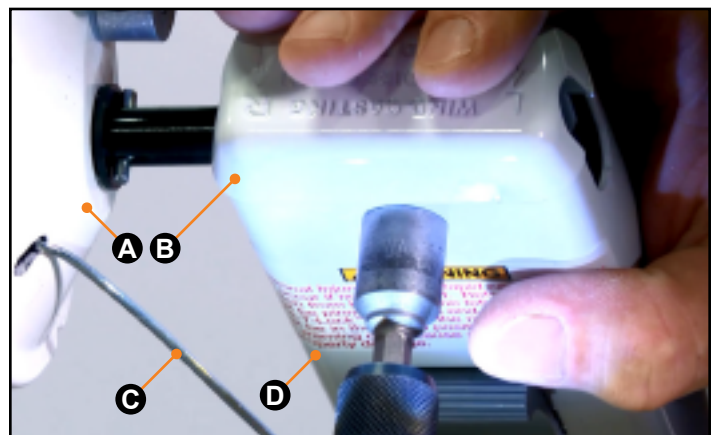


Fig.1



Solera® Universal Hardware

Manual Awning to Solera 18V Power Awning

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- 4. Separate the drive head from the support arm and secure the support arm to the unit in the travel position.
- 5. Remove the fasteners from the upper mounting bracket (Fig.2A) of the support arm assembly.
- 6. Detach the support arm assembly from the lower mounting bracket. Discard the mounting bracket.
- 7. Remove the fasteners from the lower mounting bracket (Fig.3A) of the support arm assembly.



Fig.2

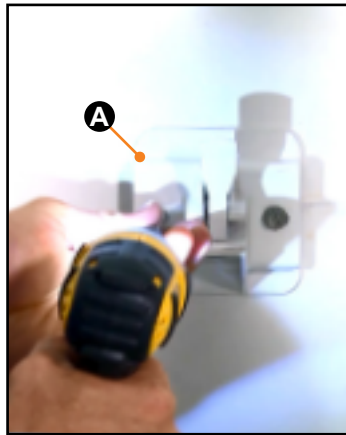


Fig.3

- 8. Firmly take hold of the drive head with a pair of locking pliers (Fig.4). Remove the cotter pin from the end cap and move the cam lock to the roll up position.

NOTE: Padding the locking pliers will prevent the scratching of components.

⚠ WARNING

THE SPRING IS UNDER EXTREME TENSION. IMPROPER HANDLING COULD CAUSE DEATH, SERIOUS INJURY OR PROPERTY DAMAGE.



Fig.4

- 9. Slowly release all of the tension by rotating the drive head with the locking pliers.
- 10. Using an appropriately-sized drill bit, drill out the rivets securing the end cap to the roll tube.
- 11. Remove the end cap and spring assembly (Fig.5B) from the roll tube (Fig.5A).

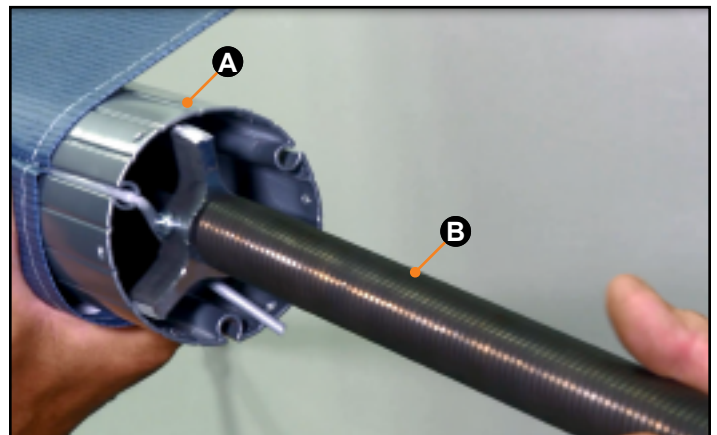


Fig.5



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12. Place the Solera® end cap (**Fig.6B**) on the end of the roll tube (**Fig.6A**), making sure it is properly seated and the roll tube channel is aligned with the channel on the end

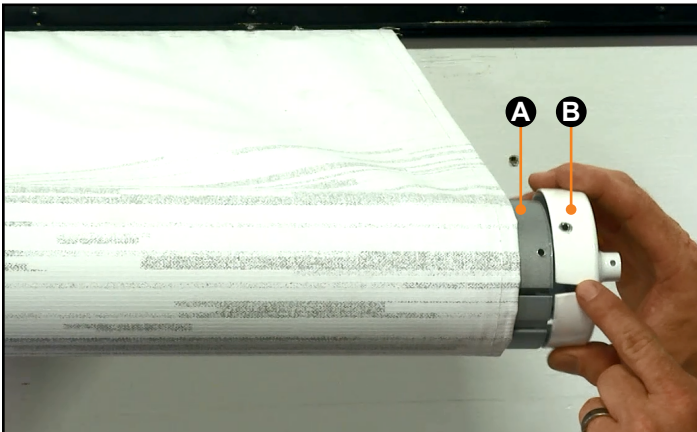


Fig.6

cap.

13. Secure the Solera® end cap to the roll tube with the provided rivets.

NOTE: It may be necessary to drill out the previous holes in order to accommodate the larger-sized rivets.

14. Pull the cotter pin from the idler side end cap, making sure to keep a firm hold on the roll tube to avoid injury or

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damage to the unit. (Pulling the cotter pin allows the roll tube to turn for installation of the drive head).

15. Insert the Solera® drive head assembly shaft (**Fig.7B**) into the end cap (**Fig.7A**).

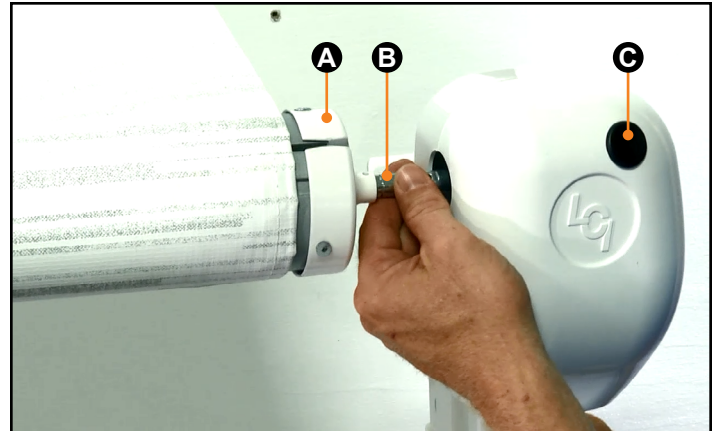


Fig.7

NOTE: When identifying the drive head assembly from the idler head assembly, the drive head assembly will have an



Fig.8

override plug (**Fig.7C**). The idler head assembly will not.

16. Align the holes in the shaft and end cap and secure with the provided #8 - 32 x 1/2" wax screw (**Fig.8**).

NOTE: Keep the head of the wax screw 1/8" from fastened to avoid compromising the structural integrity of the wax screw.

17. Place the drive support arm assembly directly under the awning rail so the top of the mount arm is touching the



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bottom of the rail.

18. Slide the drive support arm assembly outward to align below the holes of the awning previously removed before securing the upper bracket.

19. Secure the upper section of the drive mount arm to the unit with 2 of the provided #14 x 1 1/4" screws (Fig.9).

NOTE: Do **NOT** install fasteners to the lower and middle sections of the wall mount arm at this time.

NOTE: Silicone sealant **MUST** be used on all screws and

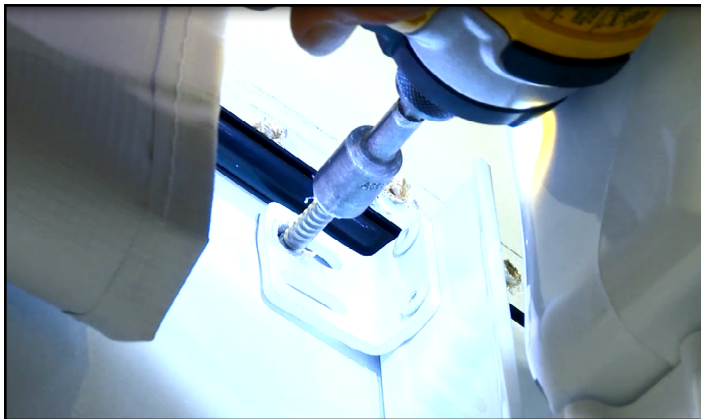


Fig.9

holes to prevent water from infiltrating the unit.

20. Re-install the cotter pin to the idler side end cap. To properly align the hole for the cotter pin, it may be necessary to slightly move the awning in or out using the extend/retract switch. (See Operation section in this manual.)

21. Repeat Steps 3-19 for the idler side of the awning, skipping all cam lock instructions.

NOTE: Because the converted awning is approximately 2" wider than the previous awning, the support arm assembly on the idler side will **NOT** align with the previous holes.

NOTE: The idler head does **NOT** have a cam lock. The cotter pin is holding all the tension of the spring assembly.

NOTE: Be sure to handle the assembly with care and always have a secure hold of the idler head.

22. Once the drive and idler side conversions are complete, cut the nylon ties containing the support arm assemblies.

23. Use the operation switch at the bottom of the drive arm assembly to fully extend the awning. (See "Operation" section of this manual).

24. Remove the manual pull strap from the roll tube.

NOTE: If the drive arm's battery is not charged, plug the battery wires into the charger and the charger into a 110V outlet. (See "Charging the Battery" section in this manual.) The awning should become operational within five minutes after being plugged in.

25. Remove the wire covers to expose the lower and middle sections of the mount arm.

26. Secure the lower (Fig.10) and middle (Fig.11) sections of the drive mount arm to the unit with the provided #14 x 1 1/4" screws or rivets. Make sure the arm is square on the unit wall. (There will be 2 screws in the lower holes and 2 screws in the middle holes.)

NOTE: For units with fiberglass sidewalls, LCI requires the use of rivets for securing the lower and middle sections of the mount arm.

NOTE: All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.



Fig.10

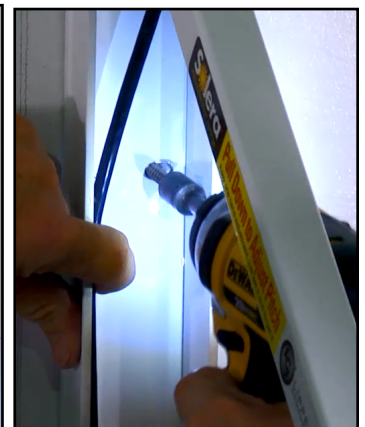


Fig.11



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Carefree Manual Awning to Solera® 18V Power Awning

NOTE: All screws supporting the awning assembly **MUST** have a backer within the structure of the wall of the unit.

NOTE: This manual will refer to the “drive side” and “idler side” throughout for various instructions. The “drive side” is the right hand side of the awning when facing the awning from the exterior of the unit. The “idler side” is the left hand side of the awning when facing the awning from the exterior of the unit.

1. Unlock the travel locks, move the cam lock to the roll out position and extend the awning approximately 12”.

2. Insert a cotter pin (**Fig.12A**) into the end cap (**Fig.12B**) at each end of the awning.

NOTE: Some Carefree systems do not have a hole on the drive end cap for the cotter pin. In this instance, the cam lock **MUST** remain in the roll out position until it is time to

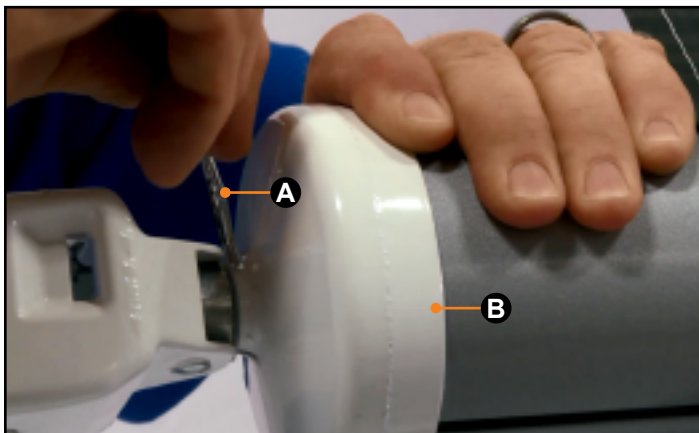


Fig.12

release the tension in the springs.

NOTE: Some Carefree systems are equipped with a cam lock assist on the drive side of the awning. If equipped, remove

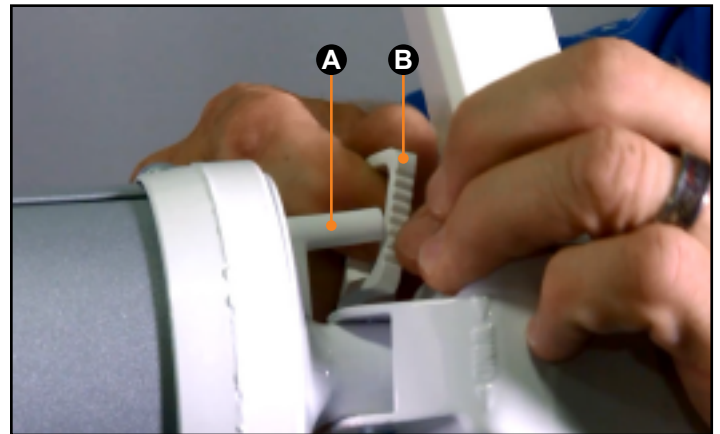


Fig.13

the cam lock assist (**Fig.13B**) from the lock pin (**Fig.13A**), making sure the cam lock remains in the roll out position.

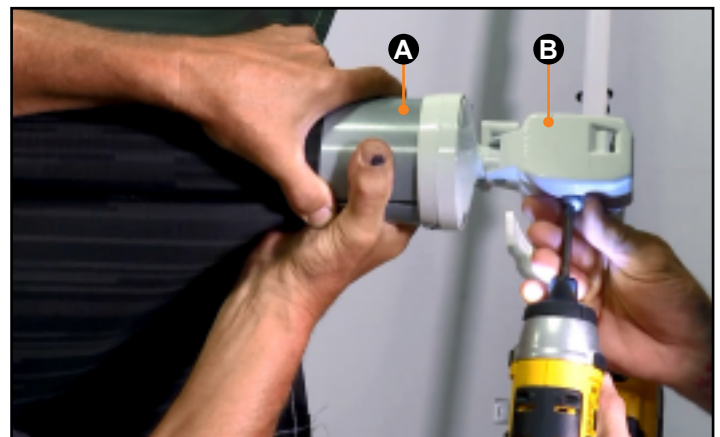


Fig.14

3. With an assistant holding the roll tube (**Fig.14A**), remove the fastener securing the drive head (**Fig.14B**) to the



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support arm.

4. Separate the drive head from the support arm and secure the support arm to the unit in the travel position.
5. Remove the fasteners from the upper mounting bracket (**Fig.15**) of the support arm assembly.
6. Detach the support arm assembly from the lower

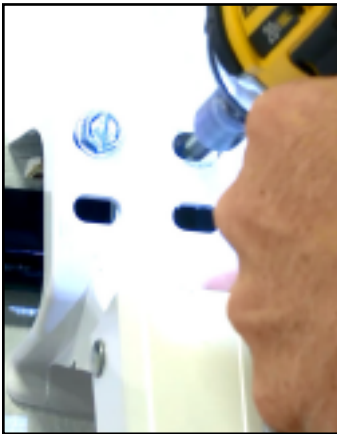


Fig.15



Fig.16

mounting bracket.

7. Remove the fasteners from the lower mounting bracket (**Fig.16**) of the support arm assembly. Discard the mounting bracket.
8. Firmly take hold of the drive head with a pair of locking



Fig.17

pliers (**Fig.17**). Remove the cotter pin, if equipped, from the end cap and move the cam lock to the roll up position.

NOTE: Padding the locking pliers will prevent the scratching of components.

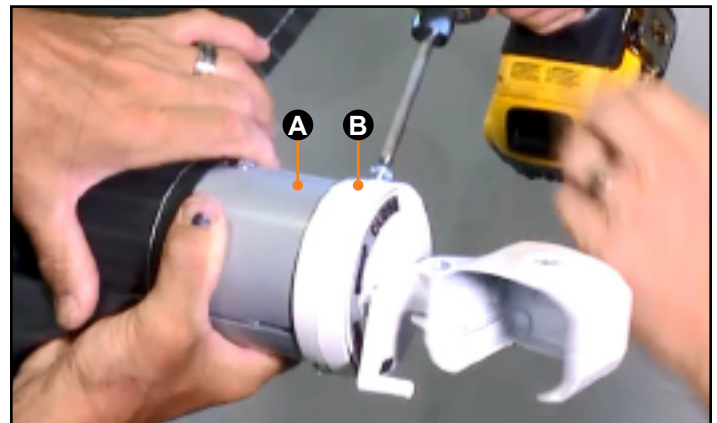


Fig.18

⚠ WARNING

THE SPRING IS UNDER EXTREME TENSION. IMPROPER HANDLING COULD CAUSE DEATH, SERIOUS INJURY OR PROPERTY DAMAGE.



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9. Slowly release all of the tension by rotating the drive head with the locking pliers.

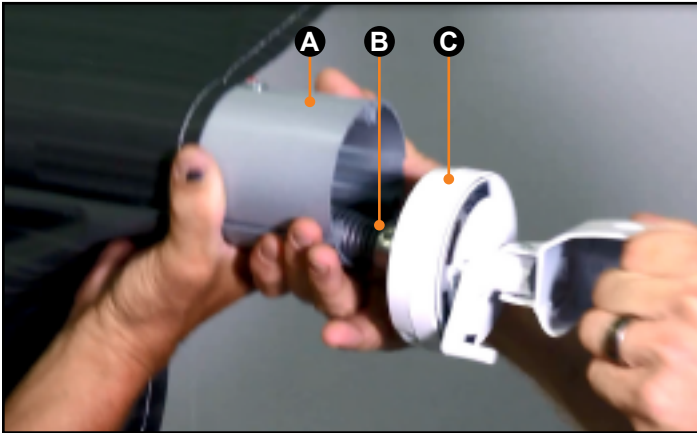


Fig.19

10. Remove the 3 screws securing the end cap (Fig.18B) to the roll tube (Fig.18A).

11. Remove the end cap (Fig.19C) and spring assembly

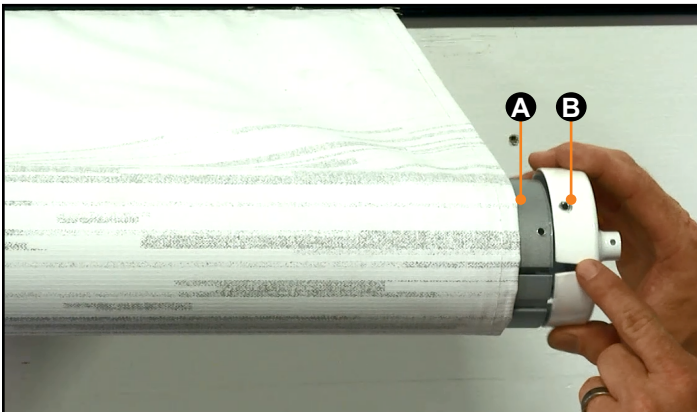


Fig.20

(Fig.19B) from the roll tube (Fig.19A).

12. Place the Solera® end cap (Fig.20B) on the end of the roll tube (Fig.20A), making sure it is properly seated and the roll tube channel is aligned with the channel on the end cap.

13. Secure the Solera® end cap to the roll tube with the provided rivets.

⚠ WARNING

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NOTE: It may be necessary to drill out the previous holes in order to accommodate the larger sized rivets.

14. Pull the cotter pin from the idler side end cap, making sure to keep a firm hold on the roll tube to avoid injury or damage to the unit. (Pulling the cotter pin allows the roll tube to turn for

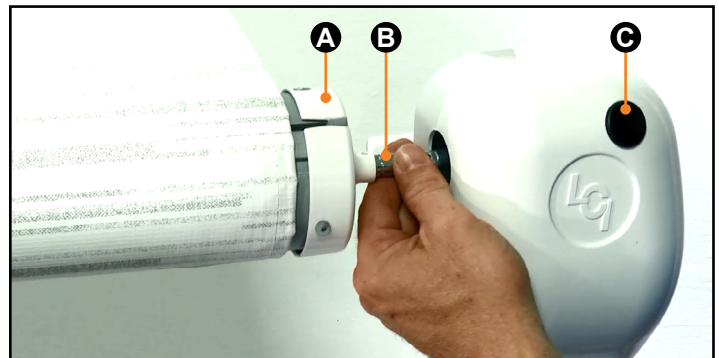


Fig.21

installation of the drive head.)

15. Insert the Solera® drive head assembly shaft (Fig.21B) into the end cap (Fig.21A).

NOTE: When determining the drive head assembly from the



Fig.22



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idler head assembly, the drive head assembly will have an override plug (Fig.21C), while the idler head assembly will not.

16. Align the holes from the shaft on the head to the end cap and secure with the provided #8 - 32 x 1/2" wax screw (Fig.22).

NOTE: Keep the head of the wax screw 1/8" from fastened to avoid compromising the structural integrity of the wax screw.

17. Place the drive support arm assembly directly under the awning rail so the top of the mount arm is touching the bottom of the rail. Secure the upper section of the drive mount arm to the unit with the provided #14 x 1 1/4" screws, aligned directly below the holes of the awning removed (Fig.23).

NOTE: Silicone sealant **MUST** be used on all screws and



Fig.23

holes to prevent water from infiltrating the unit.

NOTE: Do **NOT** install fasteners to the lower and middle sections of the wall mount arm at this time.

18. Re-install the cotter pin to the idler side end cap. To properly align the hole for the cotter pin, it may be necessary to slightly move the awning in or out using the extend/retract switch. (See Operation section in this manual.)

19. Repeat Steps 3-17 for the idler side of the awning, skipping all cam lock instructions.

NOTE: The idler head does **NOT** have a cam lock, and therefore, the cotter pin is holding all the tension of the spring assembly.

NOTE: Be sure to handle with care and always have a secure hold of the idler head.

20. Once the drive and idler side conversions are complete, cut the nylon ties restraining the support arm assemblies.

21. Use the operation switch at the bottom of the drive arm assembly to fully extend the awning. (See "Operation" section of this manual).

22. Remove the manual pull strap from the roll tube.

NOTE: If the drive arm's battery is not charged, plug the battery wires into the charger and the charger into a 110V outlet. (See "Charging the Battery" section in this manual.) The awning should become operational within five minutes after being plugged in.

23. Remove the wire covers to expose the lower and middle sections of the mount arm.

24. Secure the lower (Fig.24) and middle (Fig.25) sections of the drive mount arm to the unit with the provided #14 x 1 1/4" screws or rivets. Make sure arms are square to the unit. (There will be 2 screws in the lower holes and 2 screws in the middle holes.)

NOTE: Silicone sealant **MUST** be used on all screws



Fig.24

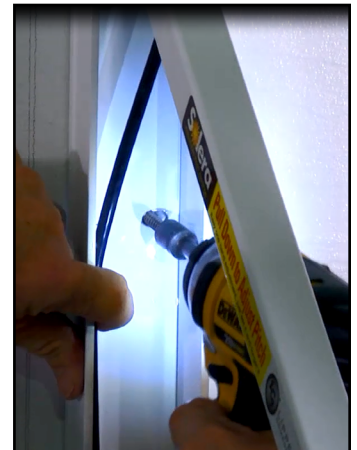


Fig.25

and holes to prevent water from infiltrating the unit.



Charging the Battery

NOTE: The battery for the Solera® 18V Power Pack is located inside the drive arm. The awning will operate 22 to 25 times before needing to be recharged.

1. Locate the battery wires (**Fig.26A**) stored inside the bottom of the drive arm. The wires will be affixed with Velcro.
2. Attach the battery wires to the included battery charger cord (**Fig.26B**).
3. Plug the charger (**Fig.27**) into a 110V outlet.
4. When the battery is fully charged, a green light will illuminate on the charger. A red light indicates the battery is still charging.

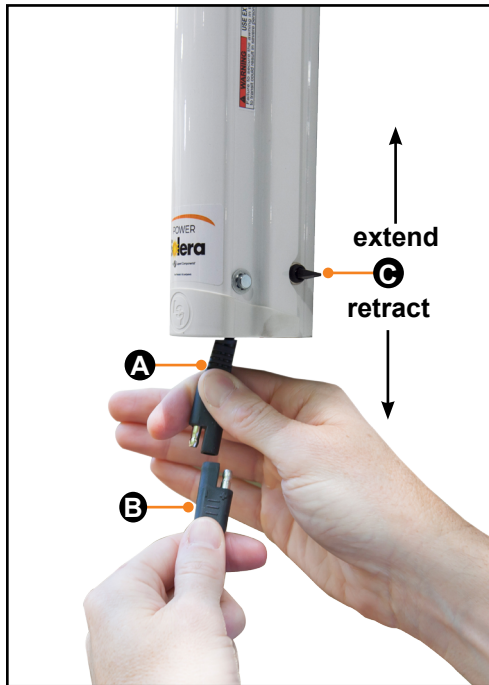


Fig.26



Fig.27

Operating the Awning

Extending and Retracting The Awning

NOTE: The operating switch for extending and retracting the awning is located at the bottom of the drive arm (**Fig.26C**).

1. Verify the battery is fully charged.
2. To extend the awning, press and hold the operating switch (**Fig.26C**) up until the awning is extended completely.
3. To retract the awning, press and hold the operating switch (**Fig.26C**) down until the awning is retracted completely.

NOTE: The awning fabric should always be above the roll tube. However, if the extend switch is engaged too long or extend is hit inadvertently instead of retract, the awning will roll up backward. This is not a defect. To correct the fabric orientation, press the operating switch down. The awning will then extend to its correct orientation and normal operation can resume.

CAUTION

TYING DOWN THE ROLL TUBE ONCE THE AWNING IS EXTENDED WILL NOT ALLOW THE FREE-FLOATING SUPPORT ARMS TO WORK AS DESIGNED AND MAY CAUSE DAMAGE TO THE AWNING OR UNIT.



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Adjusting the Pitch

NOTE: The awning will pitch itself to purge the pooling of excess water and may dump a significant amount of water without notice.

1. Extend the awning to the fully open position.
2. Choose the side of the awning for optimum shade or convenient water runoff. Pull downward on the joint of the pitch arm until desired pitch is set to allow for water runoff.

NOTE: Do not push the joint of the pitch arm (**Fig.28A**) up past the point where the two sections are in a straight line. This will put tension on the gas strut, which can cause the strut to break.

NOTE: The awning can be retracted without resetting the pitch.

NOTE: Belleville washers and a bolt (**Fig.28B**) allow the joint to remain in the position set by the operator. If the pitch arm does not hold position, it can be tightened by adjusting the bolt in the center of the pitch arm.

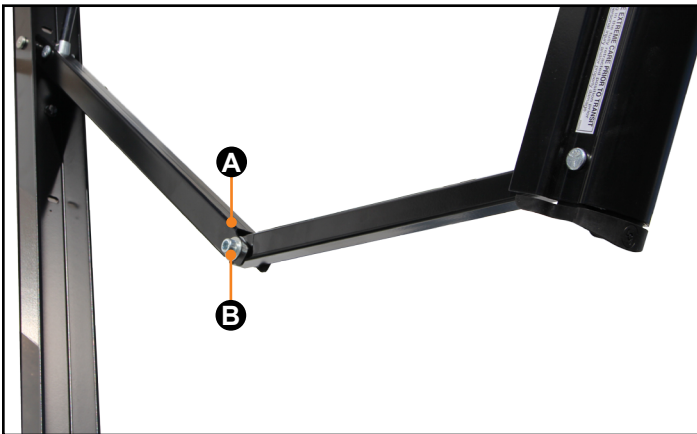


Fig.28

Troubleshooting

Manual Override

In the event of power loss or motor failure, the awning can be extended and retracted manually. Perform the following procedure to manually retract the awning.

NOTE: This procedure may also be performed to extend or retract the awning in the event of dry camping or camping without a battery.

1. Remove the rubber grommet (**Fig.29A**) from the drive head assembly, exposing the manual override nut on the motor.



Fig.29

2. Using a $\frac{7}{16}$ " socket and a cordless or electric drill or screw gun, spin the manual override nut counterclockwise to retract the awning (**Fig.30**).

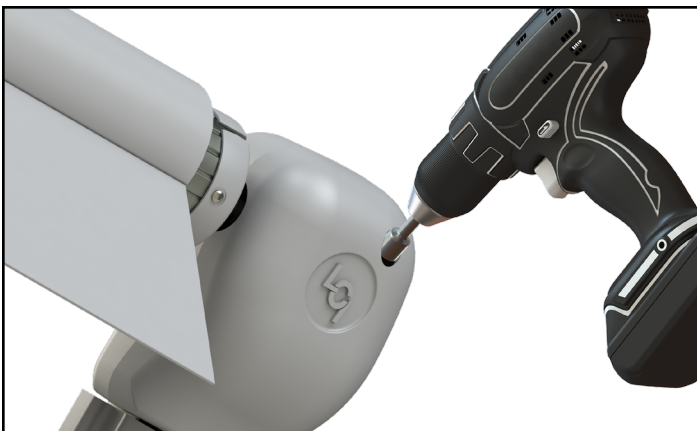


Fig.30

NOTE: Use caution when retracting the awning manually. The use of a step stool or ladder may be required to completely retract the awning.

3. When the awning is completely retracted, replace the rubber grommet in the drive head assembly (**Fig.29A**).

NOTE: The motor's internal drive system prevents the awning from moving (extend or retract) on its own. If the motor is damaged or disabled, be sure to secure the awning in the retracted position with a strap around both the outer arm and the mount arm before the manual override nut is released.

⚠ CAUTION

DURING INCIDENTS OF HIGH WIND, HEAVY RAIN OR EXTENDED TIME AWAY FROM THE UNIT, IT IS ADVISABLE TO RETRACT THE AWNING COMPLETELY TO PREVENT DAMAGE TO THE AWNING AND THE UNIT.



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Solera® Power Awning Troubleshooting

What's Happening?	What Should Be Done?
Awning won't open or close.	If optional travel locks are installed, ensure that they have been unlocked.
	Verify the fuse is good.
	Check for power at the motor when the switch is in the extended or retracted position.
Awning pitch won't stay in the flat position.	Check for bad gas strut.
	Check pitch arm bolt for proper tension. (High winds can cause the pitch arm to deviate from the flat position due to the built-in safety feature of the awning.)
	Make sure all 3 washers are in the proper location of the pitch arm.
Awning doesn't close all the way.	The awning is considered completely closed as long as the outer arm is overlapping the mount arm. This overlap can vary.
	Ensure there are no obstructions in the support arm assemblies preventing the awning from closing.
	Verify the fabric is square from unit to roll tube and is rolling up straight on the roll tube.
Awning runs slowly.	The awning will run slower during retract than extend. Retract is approximately 35 seconds while extend is approximately 27 seconds on a fully-charged battery.
	Ensure battery is charged.
	Ensure the pitch arms are not bent in an upward direction.
Awning seems to wobble when extending or retracting.	Ensure the bolts that hold the head to the support arm assemblies are tight.
	Ensure the end caps are seated properly on the roll tube.
	Ensure the shaft coming out of the head going to the end cap isn't bent.
	Ensure the wall mount is properly secured to the wall.
	Ensure no part of the support arm assemblies are bent.
Awning rolls up backward.	Ensure the wear collar spacers are all properly located in the support arm assemblies.
Awning rolls up backward.	The awning fabric should always be above the roll tube. However, if the extend switch is engaged too long or extend is hit inadvertently instead of retract, the awning will roll up backward. This is not a defect. To correct the fabric orientation, press the retract button. The awning will then extend to its correct orientation and normal operation can resume.



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Maintenance

Fabric Care

NOTE: If the awning is retracted while wet, extend the awning and let it dry as soon as conditions allow before retracting. This will help prevent the formation of mildew and add greatly to the life of the awning. Mildew does not form on the fabric itself, but on the accumulated dust, dirt and grime.

NOTE: Periodically clean vinyl or woven acrylic fabric using a mixture of ¼ cup of dish soap and 5 gallons of warm water. Liberally apply the mixture on the top of the fabric and retract the awning for 5 minutes. This will apply the mixture to the bottom of the fabric as well. Extend the awning and hose off with fresh water. Repeat if necessary. Allow to dry before retracting.



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Notes

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